

REMARKS

The Examiner has rejected claims 1-22 and 24-27 under 35 U.S.C. 103(a) as being unpatentable over Zakarian et al. (US Patent Number 5,888,946) in combination with either Ichihashi (US Patent Number 4,853,139) or Holubec (US Patent Number 4,162,985).

The Examiner contends that the references when combined teach Applicants invention because Zakarian meets the lubricant basestock limitation of the Applicants claims and Zakarian allows for the addition of polymers such as a polymethacrylate. Further Zakarian allows for the addition of other conventional lubricant additives taught by Ichihashi and/or Holubec. Applicants respectfully traverse.

Zakarian teaches a composition containing two different polymethacrylate viscosity improvers and an oil of lubricating viscosity. Further Zakarian teaches very generically at column 3, lines 36 to 45 other known conventional additives for a lubricating composition. Based on this limited teaching of known conventional additives a person skilled of the art, would expect that any conventional additive polymer would provide all weather requirements including viscosity increases due to oxidation performance. The declaration from Applicants shows that the claimed composition containing the polymer and an extreme pressure agent has unexpectedly better performance over Zakarian compositions.

The enclosed Declaration of Robert W. Cain, an inventor of the present invention demonstrates, Applicants invention passes a modified ASTM D5704 procedure except the experiment was run for up to 300 hours (test also known as L60-1) test designed to rate the thermal and oxidative stability of lubricating oils used for manual transmissions and final drive axle, in the presence of the polymer claimed by Applicants. Generally an oil passes the L60-1 test if the viscosity increase is less than 50 %. In contrast when the polymer is a polyalkene or derivative thereof that is not claimed by Applicants, the composition fails the L60-1 test. Applicants have discovered an unexpected effect of improved oxidation performance by using the claimed polymer and extreme pressure agent.

Ichihashi teaches at column 3, lines 28-40 an extensive generic list of known classes of extreme pressure agents that can be used in a lubricating composition. The

generic list discloses extreme pressure agents, sulfurized olefins and phosphoric acid ester and/or amine salts. However, given the limited guidance by Ichihashi, a person skilled in the art would have no expectation that one class of extreme pressure agent is more suitable than the other extreme pressure agents disclosed. Further Examples 1 and 2 (see Table 1 in columns 5 and 6) teach towards the use of metal containing extreme pressure agents as exemplified by the use of a zinc dithiophosphate whereas Applicants invention is metal free.

Ichihashi further teaches in Examples 3 and 4 (see Table 2 in column 8) compositions that contain an ethylene-alpha-olefin copolymer in the absence of an extreme pressure agent. Therefore, examples 3 and 4 do not teach a person skilled in the art to use an extreme pressure agent. In contrast, Applicants require extreme pressure agents to be a sulfurized olefin, a salt derived from ammonia or an amine and a phosphorus acid ester or mixtures thereof. Therefore Ichihashi does not teach, suggest, or disclose to a person skilled in the art to choose a polymer and an extreme pressure agent as claimed by Applicants.

Combining Zakarian with Ichihashi would produce a lubricating oil composition containing a metal containing extreme pressure agent. In the alternative combining Zakarian with Ichihashi would produce a lubricating oil composition containing an ethylene-alpha-olefin copolymer in the absence of extreme pressure agent. Therefore Zakarian in combination with Ichihashi does not teach, suggest, or disclose to a person skilled in the art to use Applicants polymer and extreme pressure agent from a sulfurized olefin, a salt derived from ammonia or an amine and a phosphorus acid ester or mixtures thereof. Therefore combining Zakarian with Ichihashi does not produce Applicants invention.

Holubec teaches a base oil composition which comprises (a) a base oil, (b) at least one extreme pressure agent, and (c) at least one oil soluble interpolymers. Holubec further teaches in column 4, lines 37 to 41 that the interpolymers is oil soluble interpolymers and derived from one or more monovinylarenes and at least one C4-6 conjugated diene and/or at least one C2-6 alpha-olefin. In contrast, Applicants require a polymer from an ethylene-alpha olefin copolymer, an ethylene-propylene polymer, an alpha olefin-unsaturated carboxylic reagent copolymer, and mixtures thereof and not a polyalkene or

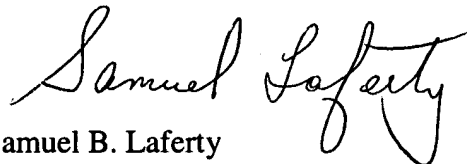
an oil soluble interpolymer of Holubec's compositions. Therefore Holubec does not teach, suggest, or disclose to a person skilled in the art to choose a polymer as defined by Applicants.

Further combining Zakarian with Holubec would produce a lubricating oil composition containing two different polymethacrylate viscosity improvers, at least one oil soluble interpolymer and an oil of lubricating viscosity. In contrast Applicants invention requires (a) a sulfurized olefin, or a salt derived from ammonia or an amine and a phosphorus acid ester, or a mixture thereof; (b) a polymer from an ethylene-alpha olefin copolymer, an ethylene-propylene polymer, an alpha olefin-unsaturated carboxylic reagent copolymer, and mixtures thereof; and (c) an oil of lubricating viscosity as defined in the attached claims. Therefore combining Zakarian with Holubec does not produce Applicant invention.

For the reason set forth above, Applicants believe the present invention is not obvious over the references used alone or in combination. Applicants respectfully request the Examiner to remove the 35 USC 103(a) rejection and find all claims allowable.

Applicants believe that fee is required for the filing of this document within 1 month after the due date of 10th May 2004. The Commissioner is authorised to charge such fee to our Deposit Account No. 12-2275. A duplicate copy of this document is submitted for such purposes.

Respectfully submitted,
THE LUBRIZOL CORPORATION

A handwritten signature in cursive script, reading "Samuel B. Laferty".

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